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(54) **CONCURRENT VIRTUAL MACHINE SNAPSHOTS AND RESTORE**

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(57) **ABSTRACT**

Various mechanisms are disclosed herein for the saving and restoring of virtual machine environment state. For example, virtual machine state can be either be saved or (multiple) snapshots can be taken of the virtual machine state. In the latter case, virtual processors can be allowed to run while the memory of the virtual machine state is being saved. In either case, virtual devices associated with the virtual machine environment can be quiesced such that these devices can prepare themselves to be saved. Once such virtual devices and memory are saved, they can also be restored. For example, restoration of memory can occur while virtual processors are running at the same time. And, moreover, restoration can occur in batches of pages, thus optimizing the response time for restoring saved data.